

The Times and Register.

VOL. XXVIII. No. 8.

PHILADELPHIA, AUGUST 25, 1894.

WHOLE No. 833.

Original.

AN IMPROVED UPRIGHT PORTABLE FARADIC APPARATUS, WITH VOLTAGE SCALE FOR ACCURATE DOSE MEASUREMENT.

BY S. H. MONELL, M. D.

In a recent editorial article (Times-Register, July 21, 1894.) I briefly drew attention to the varying opinions held by different writers in regard to the faradic battery as a therapeutic appliance. Such a grouping of opinions as was then presented illustrates how much remains to be accomplished before the faradic battery takes its place among our scientific instruments of precision. Some already have sought to discard it, and offer instead an apparatus designed to give a true sinusoidal current, but which yet falls quite short of its purpose, both because of its far greater costliness and its therapeutic deficiencies.

We may, therefore, wisely direct our efforts for the present to the further improvement of an instrument so widely known and so practically successful as the faradic battery, with which everyone is familiar. If its chief defects can be overcome it offers certain advantages at a more moderate cost than any instrument as yet suggested as a substitute. Its defects relate particularly to the variability of interrupters and the lack of means to measure the therapeutic dose. High tension coils are already made which leave little to be desired.

A year ago I became greatly dissat-

isfied with the faradic apparatus I was using, and which represented the best advances then made in the improvement of this instrument. It was an earnest attempt on the part of the makers to give the profession a better battery than was made before, but it made the mistake of putting high tension into its interrupter instead of restricting it to the coils, where it properly belonged. With due deference to the views of others, I was reluctantly compelled to admit that the singing rheotome was a failure. Its use was attended with constant aggravation, and after many experiments made with the very courteous co-operation of the manufacturers I discarded it entirely.

Since that time I have gradually developed my improved type of faradic apparatus, presenting new features of combination and introducing important and radical changes. The salient features of this battery, for which essential novelty is claimed, may be summarized as follows:

1 An upright switchboard presenting a plain, vertical surface to the operator upon which every switch and screw may be adjusted with equal convenience by either the right or left hand.

2 An invisible high tension compound coil, the secondary fixed permanently over the primary helix and the entire coil placed behind the switchboard out of sight, and requiring no regulation by the operator. This coil responds to the Geissler tube test for high tension, and furnishes seven variations in length and size of wire.

3. Separate rheostats to control either singly or jointly both the primary and secondary currents.

4. An interior battery of six Mesco dry cells.

5. A cell selector switch by which the number of cells employed may be elected at will.

6. The author's voltage scale for dose measurement.

It also contains a polarity changer, rapid and slow interrupters, an adjustable magnetic field, attachment for outside cells, etc. The parts are enclosed in compact, portable form in a handsome mahogany case about thirteen inches in height and width and nine and three-quarter inches deep. As a whole, the combining features of this battery form a practically new faradic apparatus, which the author takes pleasure in recommending to the profession.

Hitherto the twin distinguishing features of the faradic machine have been the hump on its back and the hum of its vibrator. In my improved battery the absence of the disfiguring hump gives the base the general appearance of a vertical galvanic switchboard.

Formerly the methods of regulating the strength of the secondary induced current have been not only crude and unscientific, but have been singularly incomplete. Early batteries were constructed with solid coils, in which a metallic cylinder called a "plunger" separated the primary from the secondary, and increased or diminished the current strength in proportion as it was moved in or out. The so-called "sledge" arrangement was a later improvement. By this device one part of the coil was stationary and the movable part advanced in or upon the other either by winding it up with a ratchet or sliding it on runners by the hand of the operator. Either of these plans required the careful attention of the physician and added unnecessarily to the details of technique. When, moreover, it is considered that the therapeutic qualities of the secondary induction current are not fully developed until the overlapping of the coil upon the primary is complete, it will be seen that these methods were utterly inadequate, and that by them there was no real gradation of the secondary current, but only a gradual evo-

lution from the primary to the secondary induction, and the latter, when finally and completely reached, was at its full maximum energy and no further regulation of it by the sledge coil was possible.

Observing this a later improvement was essayed by placing a wire rheostat in the primary circuit. This so cut down the battery force that both currents were modified; but while a step in the right direction it was putting the cart before the horse, for it is clear that to produce accurate and scientific results the regulation should take place in the circuit which it is sought to influence, viz., the secondary, and not alone in the primary from which it (the secondary) is derived. The former, however, was by far the easiest to do, for while a few feet of fine German silver wire (30 or 40 ohms of resistance) will cut down the primary current to zero, it would require an enormous and unwieldy quantity to control the induced current properly. In an actual test made by the author, at the Stevens Institute of Technology, the secondary coil current in the battery I am describing overcame a resistance of about 1,000,000 ohms. It will thus be seen that to control its energy is a problem of some magnitude. Moreover, the sensory effects obtained through highly resisting wire rheostats are somewhat harsh and irritating, and unsuited to the finer therapeutic uses. In my improved apparatus I have rejected "plungers," and done away with the inconvenience of pushing any part of a coil along sledge runners. I have provided a coil immovably fixed upon the helix so that there can be no question, at any time, about the completeness of the secondary current, the strength of which is regulated by a fluid rheostat, while the strength of the initial battery force may be governed by the number of cells employed, from one to six.

For external applications one, two or three cells will be sufficient. For gynecological purposes four are usually furnished with high grade batteries. In order to supply the need for a greater E. M. F. than this—a need which occasionally occurs in my experience—as well as to add a material duration to the life of the battery, I have caused six cells to be furnished in this apparatus. The strength of the primary induction current may be additionally regulated by a

wire rheostat, for which purpose it answers very well, although inadequate for secondary currents.* It is of prime importance that the secondary current should be generated in its maximum of completeness and be evenly and gradually increased from zero in its therapeutic applications. To effect this result I have placed in the secondary induction circuit a novel rheostat, the resisting medium of which is an unalterable fluid of a definite specific gravity and composition.

This rheostat marks a long step in advance of any attempt known to the author to modify the secondary current. Its importance relates not only to its direct control of current strength, but its refined resisting medium also imparts a peculiar smoothness and sinusoidal quality to the character of the current, which greatly enhances its sedative properties. It furthermore improves the evenness of the induction current by an indirect effect upon the vibrator, to which I shall refer presently. As it is this rheostat also which provides the basis for measuring the therapeutic dose of the faradic current, as I shall describe later, it will be recognized as an important contribution to the improvement of the faradic apparatus. The twin vital parts of any successful faradic battery will doubtless always be the coil and interrupter. The coil supplies the induction current, but the heart of the machine is the vibrator. Let it lack the essential qualities that belong to proper heart action, and the whole battery becomes useless, no matter how costly or elaborate it may be. A successful rapid interrupter should undoubtedly possess certain qualities.

1. It should readily start into action when the current is switched on.
2. It must not stop until the current is stopped by the operator.
3. It must be readily adjustable.
4. Its action must be fine, smooth, unvarying and constant.

* Owing to great differences in penetrating capacity of currents through the various tension wires of the coil, it is not to be expected that a rheostat of definite density would answer equally well for them all. With resistance high enough to absolutely reduce the strongest high tension current to zero, it is too dense to permit a sufficient increase in the dose of milder currents. A practical average of resistance has therefore been provided in the rheostat, and the careful operator will naturally initiate his extreme applications with a milder E. M. F. than the full force of the battery. With this precaution, the current control of the secondary rheostat will adequately cover every range of therapeutic work.—AUTHOR.

5. It must hold its rate and evenness without alteration during treatment.

6. It must not be affected by the application of electrodes, the increase of the current strength, or ordinary jarring of the floor or table on which it stands.

7. It should be able to hold its adjustment for one or more hours while in action.

8. It should make very little noise. Inasmuch as the sole function of the rheotome is to interrupt, an adjustable rheotome, which will do this evenly and hold its adjustment, fulfills its purpose and is a success. It is the interrupter which stops, or intermits, or varies its rate, which disappoints and which should be superseded by a better one; and it was because the singing rheotome fulfilled none of these conditions reliably that I was obliged to abandon it. In my various experiments to determine a practical interrupter I have discarded certain innovations and selected the type which I believe to be the simplest, most satisfactory and least liable to variation. Superior workmanship has much to do with the success of tools even when they are called by the same name—as witness the difference between a cheap and a fine watch—and the makers of this battery have succeeded in producing an excellent "spring vibrator" of such fine quality and action that it leaves little room for special criticism. Here, however, its definite accuracy and evenness is largely established by the fact that its actuating energy from the battery cells is a fixed and constant E. M. F., which is not altered by the regulation of the secondary current, for it has been chiefly the variations in the force of the primary current which have heretofore affected the rheotome and impaired its reliability.

The introduction of my new method of controlling the secondary current independent of the battery circuit has given to this rheotome much of the stability it before lacked. As a test experiment on March 18, in my office, at 9.30 o'clock A. M., I set this battery in action with a single dry cell and with the rapid vibrator finely adjusted. The battery was placed on a small stand where it would feel the usual floor disturbances and meet ordinary conditions. It was tilted several times and lifted and replaced without stopping the interrupter. In an hour or so the location of the stand proved inconvenient and the battery was carried to another

part of the room without affecting the vibrator in the least. At 11 o'clock A. M. and at 1 o'clock, 3, 5 and 9 o'clock P. M., it was carefully noted, and all through the day it maintained unbrokenly its soft and even hum. It was allowed to go on through the night, and in the morning its note was still unchanged. At 8.30 A. M. it was stopped by the author after a continuous run of 23 hours, with an E. M. F. of a single cell. This test was not only a superb demonstration of the perfection of the rhectome, but an unexpected proof of the endurance of the cell, since the makers do not claim a steady action for 24 consecutive hours.

The slow interrupter of this battery will adjust to rates from 60 to 2000 per minute, while the rapid vibrator will carry this rate up to about 30,000. No greater rate seems necessary to the writer. To those who desire to demonstrate the differences in physiological effect of varying rates of interruption the static machine affords an impromptu means of making tests. It is difficult, if not impossible, to construct a faradic device which can be adjusted at will to give every known rate of interruption from, for instance, one to a million per minute, but to accomplish this with the static is no trouble at all. It is only necessary to turn the machine slowly or rapidly and hold near the positive conductor a grounded ball electrode. Its range of action cannot be excelled, for I can shift it to any degree of proximity between actual contact and a full sparking limit, say four inches. To make the experiment, let the physician insulate himself and hold in one hand the end of a chain or rod attached by the other extremity to the positive pole of the machine. If now we consider each discharge of this high tension current as a forceful stroke we will perceive that the longer time given to its impetus the longer stroke it will make, for electricity is a form of energy which requires an appreciable time to travel a given distance. If, by holding the electrode very near the conductor, we make the time between the discharges infinitely brief, we approximate the effect of a mild continuous current which is not felt at all. We thus demonstrate that an excess of rapidity in breaking the current will thwart the purpose for which breaks are made and that a moderate interval is required between the

discharges to produce perceptible effects. Holding the electrode slightly further from the pole the insulated person will now feel a finely maintained tension in the hand holding the chain. Separating the conductor and electrode a trifle farther, we impart a greater length to the stroke, so that it travels further, and acts more deeply in the tissues. While we confine ourselves to these modified but still exceedingly rapid interruptions the application is sedative in character, with effects upon sensation and circulation chiefly. To stimulate muscle tissues to either small or great contractions, it is manifestly needful to give each stroke time enough to strike a longer and deeper reaching blow, as well as to give time for the contracted muscles to relax. This is readily done by lengthening the space between the electrode and the conductor and thus in a few moments we may make every conceivable test upon the motor nerves and illustrate all the possibilities of faradic vibrators and mechanical currents. As a handy object lesson it is worth many pages of theory upon the subject.

To those interested in currents of high potential and high frequency I may say in passing that the long coil of this battery gives very decided static effects, glowing the Geissler tube, sparking between metallic electrodes not in sensible contact, and sending its current through open circuits to the distance of several feet. And here I may observe that I am by no means convinced that the frequency of the faradic high tension current is so low as has been held by authors. In this battery I have intentionally omitted a so-called single contact key for the reason that it adds a wholly needless detail, single faradic shocks being always obtainable in every battery by simply flicking against the terminal post the cord tip of the active electrode or by controlling the slow vibrator by hand. Upon doing this with the Geissler tube in the secondary circuit we find that the luminous effect of separate oscillating discs, like rolls of coin stood on edge, appears exactly the same as during the most rapid interruption, except, of course, that it is visible only during the passage of the current. An identical appearance is obtained also with both the fast and the slow vibrator in action and points us to the conclusion that the same theory which divides the static spark into an infinite number of discharges is

equally applicable to the faradic discharge through high tension coils, each period of the interrupter representing an infinite sub-division of oscillations, allied in character to the phenomenon of high frequency currents, and suggesting the potential relationship between the two. In view of this fact the therapeutic possibilities of faradism seem amazingly enlarged, depending, however, upon the march of improvement in the mechanical construction of batteries.

My original plans for this battery were drawn by me on October 4, 1893. During the process of experimentation various changes have been made, as experience eliminated defects. On the 29th of January, 1894, I devised my method of measuring the therapeutic dose of the secondary current by means of a voltage scale. Since that time the battery has been practically completed, and given a series of careful tests at my hands, in which it has displayed a gratifying superiority over other instruments which I have used. It may be interesting to note several points illustrating the working of the apparatus. For example, a single cell suffices to start either vibrator into perfect action, and if the rapid interrupter is properly adjusted to one cell the E. M. F. may be increased at will to two, three, four or even six cells, without altering the rheotome. If the extreme E. M. F. is employed, however, the magnetic field will usually need a slight alteration to compensate for the additional energy. In practical therapeutics, where hasty manipulation of apparatus is usually necessary, it will generally be desirable to supply the rheotome with E. M. F. sufficient to overcome any ordinary or accidental disturbance. Hence three or four cells may be employed for this purpose, although the secondary current thus generated, especially with the slow interrupter, would be too powerful for many forms of external treatment, unless modified to suit the case.

And here is seen the advantage of the secondary rheostat, by means of which the dose is exquisitely regulated without affecting the interrupter, while regulation with a sliding coil or primary rheostat tends to affect the vibrator at once and causes variation and uncertainty. With an electrode in the palm of each hand and an E. M. F. of four cells, I have increased a very slowly interrupted high tension current through the secondary rheostat from a barely perceptible strength until the arm mus-

cles were contracted clear to the shoulder without changing the rate and steadiness of the rheotome, or causing me any other sensation than that of motion. This current will produce vigorous muscular contractions in any part of the body with the same painlessness that is so remarkably characteristic of both the static induced and the sinusoidal currents.

Perhaps no operative feature of this battery gives greater satisfaction than the facility with which the switch changes may be made without shock or annoyance to the patient. If it is desired to substitute a shorter wire for a long one, or vice versa, or to switch additional cells into circuit, or to reverse the polarity, or, in fact, make almost any change in the treatment or dose, it may be made at will without withdrawing any spool, or selecting another coil, or stopping the battery to begin from zero again; and should the vibrator stop during treatment it can be set going without startling the patient. In batteries depending for regulation of current strength upon the sledge coil or primary rheostat such sudden fluctuations must be carefully avoided, as they cause the patient a greater or less degree of shock, and unless due caution is exercised in treatment, the patient often acquires a nervous dread of having the battery "meddled with" during an application.

All this is obviated in my improved battery, inasmuch as the secondary rheostat takes up the excess force of the blow and permits rapid fluctuations without discomfort. If the change is one which decreases the dose it will cause no sensation whatever. If it increases the dose the normal increase will be felt, but no startling surprise to the patient will accompany the change—and it can be made entirely imperceptible by first raising the secondary rheostat a trifle.

Among other distinctive features of the battery, the positive and negative poles may be reversed at will during treatment without removing the electrodes; the primary rheostat may be wholly or partly cut out of circuit as desired, and the secondary rheostat can by means of a separate switch be short circuited at will. Both the rapid and slow interrupters are actuated from a single magnetic field, and it requires but a minimum of adjustment to set in action either rheotome that may be required. The absence of any separate

coils to shift, exchange or slide on runners relieves the operator of a more or less troublesome detail, and removes a prolific source of aggravation to the patient. Upon the keyboard is a compound switch, by means of which the operator instantly selects the tension and length of wire indicated, or blends at will the influence of the primary with the secondary current. The portable dry cells can be instantly removed from the case, or replaced as occasion may require, a hinged door opening for this purpose. From one to four cells will usually furnish E. M. F. for ordinary applications. As these in time deteriorate from frequent use, I have caused two additional cells to be placed in this battery, so that, by employing these as reserve energy for exceptional cases, and finally to reinforce the cells which gradually weaken, the life of the battery will be greatly prolonged. It is presumed that the six cells contained in the apparatus will last for upward of a year in ordinary use, and new ones will then cost but a trifle.

The bright parts of the switchboard, which require occasional cleaning or polishing, are removable, as are also the tubes of the fluid rheostat. When, after some use, the platinum tips and interrupters become oxidized, they should be unscrewed and polished with a little Sapolio on a small piece of moistened cloth, or with a jeweler's buff; but never scraped with a knife, as is commonly done. The more carefully the vibrators are kept bright and free from tarnish, the more satisfactorily they will work. Whenever a black spot forms under the platinum ball, clean it off, even if it has to be done every day, and the rheotome will then perform its duty faithfully. If the interrupter loses its spontaneity of action, look for oxidation and remove it by polishing both ball and spring.

Owing to the importance of the subject and the length this paper has already attained, it will be necessary to reserve a full account of my voltage scale for dose measurement for a separate and subsequent article. In concluding this section, however, I wish to express my obligations to the Jerome Kidder Manufacturing Company, No. 820 Broadway, New York city, for their appreciative co-operation in experimental work and the thorough manner in which they have carried into effect my original designs for this faradic apparatus.

—44 West 46th St., New York City.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

Subscription Price, - - \$1.00 Per Year.

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PUBLISHED BY

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1725 Arch Street.

PHILADELPHIA, AUGUST 25, 1894.

NON-PARASITIC ORIGIN OF MALIGNANT DISEASE.

In a recent issue of the London Lancet Mr. Richard Bramwell, of Charing Cross Hospital, considers this subject at length, and takes the position that malignant maladies are in no sense contagious.

Of late years investigation with the microscope has been pressed with great zest by many eminent and enthusiastic savants, in search of a specific germ of cancer. But, so far, failure has been the invariable result.

Koch discovered and cultivated the specific bacillus of tubercle, and some believed that in many respects there was a close affinity in the clinical features of cancer and this lesion. On close examination, however, we will discover that clinically the dissemblance between the two is very slight. Both develop a cachexia, it is true, and are generally progressively fatal; otherwise, there is practically nothing in com-

mon between them. That tubercle may be propagated by infection is indisputable; but with cancer or that type of embryonic cell proliferation in the connective tissues, sarcoma, every attempt at inoculation has failed. Men cohabit with impunity when they are aware that their wives are suffering from uterine cancer. There are no definitely authenticated cases on record in which one has ever infected himself by handling cancerous specimens. Nor have we any proof that the disease can be directly propagated from the mother, through the fetal circulation. It not infrequently happens that a mother, the subject of mammary or uterine cancer, conceives and gives birth to a child, the disease, in the meantime, making steady headway, yet the offspring bears no evidence of the taint of infection.

In therapy we use a wide distinction between cancer and tubercle. In one, constitutional hygienic and climatic treatment may retard or wholly cure; in the other, no impression is made on the disease by either systemic remedy or regimens.

The cause of cancer remains an impenetrable mystery. The scientific field of recent years leaves this question where it was 25 centuries ago. However, one side of the discussion is definitely closed, viz., that it is not a germ disease and cannot be transmitted. The practical interpretation which we must apply to these conclusions is, that in this terrible malady our treatment must continue on empirical lines. It is puerile and futile now to talk of a local growth infecting distinct parts when we are without proof of the necessary elements.

Some surgeons, without any positive evidence of its parasitic properties, when amputating the mammary gland for cancer, carry the scalpel up into the axillary space and remove all the tumified superficial lymphatics. Had they been left untouched, as soon as the breast was removed, their tumescence will promptly disappear.

This practice always aggravates the danger of the operation, leaves a tight, contracted cicatrix in the axilla, which ties down the arm, strangulates the circulation, and soon leaves the patient in great distress, through pressure on the brachial flexus. But, worse than all, the additional mutilation makes no impression on the march of the disease, which is rather hastened than retarded by it.

BAR THEM OUT.

An interesting episode recently occurred in New York in connection with the investigation of the police department of a character calculated to attract the attention of that portion of the medical profession who are fain to hope that some slight shadow of ethical decency, independence and honor yet remains.

In the course of the investigation of the Lexow Committee, among others who have come into the dragnet of investigation was Captain Devery. In order to make a show of righteous indignation, if nothing more, the Police Commissioners ordered the captain to appear before them in order that he might explain away certain important accusations. But when the time for the hearing arrived a certificate came in from Dr. Wammack, a police official who had the captain under his care as his patient. The irate Commissioners now ordered the medical staff to appoint a special committee of their number to visit Captain Devery and verify the former physician's statement.

The police medical board, however, declined to take any such action, inasmuch as they regarded it as an insult to Dr. Wammack, which they believed it was their duty to resent.

In the meantime Captain Devery's family dismissed Dr. Wammack and employed a general practitioner in the neighborhood of where they reside.

The commissioners now ordered Dr. Wammack to visit Devery just the same, whether he was discharged or not. It seems now that the doctor, fearing the decapitating ax of the political boss, meekly submitted to their order for him to encroach on another doctor's case while his own conferees had so nobly placed the aegis of their protection but a few days before between him and a board of tyrannical superiors.

But when the weak and scared doctor arrived at the captain's house he was met at the door by Mrs. Devery, who warned him to keep away from the premises; that they had employed another physician, whose address she gave him, and suggested that he would no doubt give all the necessary information.

Dr. Ambrose Becker, the family physician, is said to be an honorable, upright practitioner. He immediately made a statement to Dr. Wammack and

cordially invited the doctor in to see the case.

But instead of doing this, a report was sent to the Commissioners, who then employed a professor and a specialist, Dr. Edward Fisher and Dr. Allen McLane Hamilton. Away they hied, stimulated, no doubt, by the hope of a fat fee from the public treasures. But did they first visit Dr. Becker, request his permission and state the circumstances under which they were employed? Not they. A professor or a specialist notice that nondescript, the general practitioner? No! no! Not in these days of progress. But when the Commissioners' weak-kneed, chicken-hearted subordinate reached the captain's house and announced the advanced rank of his companions, he imagined the door would fly open to receive them, but great was the disappointment of the trio when the fearless wife of the captain ordered them away.

When interviewed by the press it is said that Drs. Fisher and Hamilton sought to excuse their unprofessional and reprehensible conduct on the ground that they were not aware when they were employed by the city they were obliged to observe ethical lines. If this statement is true we would advise that before they do any more lecturing to students they diligently apply themselves to the acquisition of the first principles of the moral code.

Now we know nothing about the merits of Captain Devery's trouble with his department nor do we care, but when it comes to pass that any corporation, public or private, undertakes to instruct professional men in their duties to compel them to stoop to dishonorable practices, to ignore the rights and interests to their fellow-practitioners, then, indeed, the time has come for the whole profession to rise to protest against and condemn any members of it that will recklessly violate professional honor for the sake of a miserable pittance.

It is about time that the profession in America took concerted and aggressive action and came to some final settlement on the principle involved in this case of Devery's.

We are constantly being acquainted with cases of interference by police surgeons, fire surgeons, railway surgeons, lodge doctors, etc.

Professional honor, integrity and independence in all truth, we must admit, seems something of the past.

The profession is vastly overcrowded, the times are hard, and a decent living in the profession without "faking" or even resorting to practices with sometimes the color of crime is exceedingly difficult to realize.

In the "upper ten," who are fast and firm believers in a big show, grim want plays his harshest freaks, and to them a large prospective fee is like a red blanket before a mad Castilian bull.

The Medical Record says that the State of New York is practically disfranchised from official position in the American Medical Association because its State Society has no code but that laid down in holy writ. The Record must forget the New York State Association, which has the fullest access to the American Medical Association, as it recognizes the same organic laws. This body represents a very large number of able New York physicians.

Correspondence.

SHORTHAND IN MEDICINE.

Sir:—In order to promote the use of shorthand in medicine it is desirable that a list should be compiled of all those who use it. We would, therefore, ask each practitioner and student who is acquainted with phonetic shorthand to send his name and address to Dr. Neil, Warneford Asylum, Oxford, England. A printed copy of the list will be sent to each one whose name appears in it.

The preparation of a list of medical phonographers is intended as a preliminary step to such farther measures for mutual encouragement and help as may appear advisable.

W. R. GOWERS, M. D., F. R. C. P.
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Under the charge of T. H. MANLEY, M. D., 302 W. 53d St., New York.

CRITICISM ON THE MANAGEMENT OF APENDICITIS.

The first argument of the advocates of immediate extirpation is unquestionably, from a physiological point of view, a decided assumption of fact. The vermiform appendix, although its especial function in the economy of digestion has not yet been discovered, is a portion of the large intestine furnished with an abundance of glands and of absorbent vessels. Its orifice, under normal conditions, is patent, and hence the contents of the small intestines, almost immediately after their passage through the ileo-cecal valve, must constantly pass in and out of the appendix. It also has the power of peristalsis. With what show of reason, therefore, can it be said that this organ, as fully equipped for work as any other part of the large intestine, is useless? Furthermore, there is surely nothing either in the gross or in the minute anatomy of this organ to render it peculiarly liable to repeated attacks of inflammation *de novo*.

These facts dispose of at least two very powerful arguments brought forward by the advocates of immediate extirpation, and should establish the right of the appendix to at least respectful investigation instead of the impatient scorn and intolerance with which it has been considered by surgeons generally.

With regard to the other arguments, on both sides, it is merely a matter of personal education; for they are, in effect, assertions on one side and denials on the other. In this condition of things we see no relief until the coming of the disinterested and unprejudiced statistician.

One thing, however, is certain; that the opponents of the conservative treatment of appendicitis have done very serious harm to their cause by their extreme self-confidence, their intolerance and their boastfulness. It scarcely demands a prophet, we think, to foretell a very general repudiation of this operation, at least for most of its present indications, at no distant date. Whatever its actual merits may be, the practice of

its indiscreet adherents will cause its condemnation.

It would naturally be thought that our recent severe lesson in the matter of Tait's operation and the present aspect of gynecologists crowding upon each other's heels in their haste "to put on record" the fact that they are now most conservative in the treatment of the uterine appendages would have made us rather cautious, at least for a time, in our investments in new medical crazes. But that is a curious trait in human nature which causes men to rush with an irresistible impulse to the top of a hill—metaphorically speaking—only to turn round with the crowd and rush madly down again. And it is this exhibition of human weakness which lends a touch of grim humor even to the most fatal of medical fads.

—Northwestern Lancet.

MANAGEMENT OF THE INTESTINE AFTER ABDOMINAL SECTION.

Drs. Skene Keith and George E. Keith (New York Journal of Gynecology and Obstetrics) says:

When the general condition of the patient is fairly good and the abdomen is not distending, and when there is not much colic, let things take their natural course. This advice holds for the great majority of cases.

When the abdomen is distending without a previous state of peristaltic action shown by much colic, and when there is a tendency to vomiting, give the mixture of magnesia until the bowels move.

Treat distention without colic or vomiting by the quinine injections.

Quiet excessive peristaltic action by small doses of morphine given hypodermatically.

For distention following excessive peristalsis, give a small dose of morphine followed in a few hours by castor oil or magnesia.

When there is septicemia, wash out the abdomen as soon as the condition is evident and treat as above.

Do not get into the habit of calling septicemia shock, exhaustion, or any such

term. Be content to believe that some mistake has been made in the antiseptic precautions and that additional care must be taken in the future.

THE RADICAL CURE OF HERNIA.

Dr. F. C. Larimore (Journal of the American Medical Association) says:

The operation for the radical cure of hernia is a safe operation. Mortality, 0.86 per cent.

The operation results in a permanent cure, relapses occurring in but 7.5 per cent. of the cases.

The operation should be made with the strictest aseptic technique.

Make a free incision over and with the long axis of the tumor, from without inward.

Open the sac and examine the contents deliberately and carefully, generally resecting the omentum.

Dissect up the sac, ligate its neck high up with a chain suture, and resect it below the suture.

Restore the obliquity of the inguinal canal by two rows of deep, continuous double sutures.

Close the integument with a buried suture.

For all sutures use kangaroo tendon, and do not draw so tight as to constrict the tissues.

Final dressing: Iodoform collodion.

Keep patient in bed from three to seven days.

Do not put on a truss.

FISH-BONES IN THE THROAT.

Dr. Adolph Rupp (New York Medical Journal) says:

The reasons for the impaction of foreign bodies, such as fish-bones, needles, pins and the like, are not to be sought for in the pharynx primarily.

Under normal conditions, the tongue, fauces and pharynx, in so far as deglutition is concerned, are perfect organs, looked at as a mechanico-physiological apparatus.

The primary and chief cause of fish-bones, needles, etc., being caught or entangled in the throat must be looked for in the bolus itself—the position of the fish-bone or needle in the bolus, whether lying deep or on the surface, the angle the fish-bone or pin occupies to the long axis of the bolus, and, besides, the varying and various forces that act on the bolus as it is forced toward the stomach.

Possibly the bolus leaves the tongue and descends the pharynx with a twist or screw-like movement.

The Falk-Kronecker-Meltzer conception of deglutition, based on experimental results, may be utilized in explaining how fish-bones become impacted in the throat—and these experimental results do not exclude the element of gyration as one of the forces that impel the onward-shooting bolus.

The epiglottis is an indifferent organ in so far as deglutition is concerned—also for foreign bodies.

Suits for malpractice continue to harass the members of the profession of medicine and surgery in various parts of the United States. Ability and skill appear to be no protection against these suits; but lack of funds—property—on the part of the physician is a sure safeguard against the annoyance and expense of defending such suits. We do not advise the doctors of Michigan to avoid accumulating property, but, if they can just as well as not keep themselves execution proof, they will sleep better and perhaps live longer.

—Detroit Emergency Hospital Reports.

LUCKY NUMBERS AND LUCKY MEDICAL STUDENTS.

Two French medical students, M. Gustave Lefilliatre and M. Georges Labey, had recently a letter from a solicitor named Leger, of Marines, Seine-et-Oise, stating that the late Dr. Dubois, a medical man at Chars, had left a will by which he bequeathed all his surgical and medical appliances, free of legacy duty, to two students obtaining their degree at the examination next after the decease of the testator. The two students selected were to be those who came out No. 14 and No. 84 in the list. At first it was thought the letter was a hoax, but the two young men went to the place indicated, and were there duly presented with an exceptionally fine collection of instruments and accessories of all kinds for division between them. They learned that their being specially chosen was due to the fact that that the deceased doctor had twice passed an examination, and that he had on those occasions been No. 14 and No. 84 on the lists.

—N. Y. Medical Record.

Therapeutics.

Under the charge of LOUIS LEWIS, M. R. C. S., Philadelphia.

TRIKRESOL; A NEW GERMICIDE.

At the fourth meeting of the Association of Military Surgeons of the United States, held in Washington, May 1 to 3, 1894, attention was called to the valuable qualities of trikresol in general surgical work ("The Germicidal Value of Trikresol," by Walter Reed, Surgeon U. S. A.).

After briefly reviewing the various mercantile preparations of the coal tar derivatives, such as asepsol, creolin, lysol, solveol, saprol, etc., Dr. Reed called attention to Henle's painstaking investigation of creolin (A. Henle, "Ueber Creolin und seine wirksamen Bestandtheile," *Archiv fur Hygiene*, Band ix., 1889). Henle's observation that cresol, as well as phenol, dissolves very well in soap solution, was important; and especially valuable was his conclusion that the germicidal value of creolin was due to some body contained in the tar oil of which it is made, and which body stands very near to cresol. This appeared to be a legitimate deduction, for inasmuch as creolin contained so little phenol, and yet exhibited a high disinfectant power (staphylococcus aureus being killed in a half minute by a five per cent. aqueous solution), it should be directed to the insoluble hydrocarbons, the homologues of phenol, was natural that Henle's attention contained in tar oil.

Reed thinks that much credit should be given to Laplace, of New Orleans, for the work he did bearing directly on this subject. While working under Koch, in 1888, Laplace mixed equal volumes of crude carbolic and concentrated sulphuric acids, and found that he had thereby obtained a dark, syrupy liquid, which was easily soluble in water and which possessed remarkable germicidal power. A two per cent. watery solution of the mixture destroyed anthrax spores in 72 hours, whereas a two per cent. solution of either carbonic acid or creolin was absolutely without influence. Here, then, was taken the first step in the evolution of the

germicide which is at present attracting so much attention in Germany. Carl Frankel's exhaustive review of Laplace's work (*Zeitschrift fur Hygiene*, Leipzig, 1889, Band vi.) proved conclusively that the body evolved and brought into solubility by mixing crude carbolic and sulphuric acids was none other than cresol, and not only confirmed Laplace's observations, but extended them considerably.

Arising from the important work of Laplace and Frankel, a number of investigations have been carried on, during recent years, in Germany, by chemists, bacteriologists and surgeons, growing out of the study of these higher homologues of carbolic acid—viz., the cresols. These differ from phenol by having one atom of hydrogen replaced by the methyl-group CH₃. Thus, if we represent carbolic acid by the formula C₆H₅OH, that for cresol would be C₆H₄CH₃OH. There are three of these bodies, known as ortho-, para-, and meta-cresol. The first two are crystalline bodies, the third appearing as a colorless, thickish fluid, whose boiling-point is about 201 degrees C.

Much difficulty has been experienced heretofore in trying to obtain these isomeric cresols in a pure state; but recently quite a step forward has been made in chemical methods, and they are now manufactured in a pure state from coal tar, the three being presented together and happily named trikresol.

The latter is a white liquid, of a creosote-like odor, specific gravity 1042 to 1049, and soluble in water to the extent of 2.55 per cent. Its solutions are clear, and unlike solutions of carbolic acid do not impart any sensation of numbness to the fingers and hands of the operator. It is also said to be less irritating to wounds than either carbolic or bichloride solutions.

As regards its great value as a germicide, Gruber (*Archiv fur Hygiene*, 1893, Band xvii. S. 618) and Reed bear strong testimony; one per cent. solution of trikresol kills the pyogenic cocci in watery

solutions invariably in half a minute. The same strength solutions in rich albuminous fluids require one and a half minutes to destroy staphylococcus aureus. Its action is thus seen to be unusually prompt, even in the presence of albumin, which is an important point in its favor as compared with the older germicides.

Finally, its poisonous qualities are rated as slightly less than carbolic acid; but since one per cent. solutions of this agent accomplish the work of five per cent. solutions of carbolic acid, the danger from poisoning is greatly diminished. We invite the attention of the profession to this new germicide, which, to us, appears to promise a wide field of usefulness in surgical and gynecological work.

—Therapeutic Gazette.

THE EMPLOYMENT OF FORMALIN IN CLINICAL PRACTICE.

The enormous antiseptic power of formic aldehyde solutions and their comparative non-poisonousness have indicated the employment of Formalin as a surgical disinfectant, and especially recommended it as an external remedy for lupus, cancerous affections, and in very dilute (half per cent.) solution for the irrigation of cavities.

The effect of the preparation upon the human organism was tried by Dr. Geger in Professor Penzoldt's Clinic, at Erlangen, and solutions from $\frac{1}{4}$ to 25 per cent. strength employed as gargles and lotions in the mouth and throat. He came to the conclusion that Formalin was one of the strongest antibacterial remedies known, and that although in an undiluted state its vapors and local irritant action on the mucous membrane contra-indicated its use, he recommended the employment of 0.6 and 0.8 per cent. solutions as mouth-washes, and 2.5 per cent. solutions in skin diseases, such as psoriasis and lupus.

At the same time Professor Lehmann, after studying the properties and characters of Formalin, recommended it as the best and safest, as well as the cheapest preparation for disinfecting clothes, toilet articles and household goods.

Stimulated by these experiences, Dr. F. Winckel tried it in simple and gonorrhetic cervical leucorrhea, and has

made use of it in a number of cases extending over the last 12 months. His results are published in the "Jubilee Festival Book" of the Berlin Society for Midwifery and Gynecology. In 155 cases treated, 6 ounces of a 10 per cent. formic aldehyde solution was prescribed with instructions to use two teaspoonsful, or one tablespoonful, in a quart of luke-warm water for vaginal injections once or twice daily. With a tablespoonful (half an ounce) the proportion in the solution was, therefore, 1 to 10,000. Even in this dilution a slight burning sensation was frequently experienced by patients, but it was found that even a 10 per cent. formic aldehyde solution could be painted upon the mucous membrane of the cervix and uterus without the burning being more pronounced or any unpleasant feeling following. Combined injections into the uterus and painting of the cervical canal are only necessary in very persistent cases. In quite a series of cases patients suffering from sub-acute gonorrhea cervicalis have said, and it has been borne out by clinical observations, that with the use of the vaginal injections alone more excellent results were obtained in regard to swelling, reddening, hypersecretion and sensitiveness. Several people even affirmed from the very commencement of the treatment that they had never experienced so effectual an irrigation.

Where vaginal injections with Formalin do not suffice, ichthyol, tannin or other medicaments can also be applied, or 1, 2, 5 or 10 per cent. Formalin solutions painted on the uterine mucous membrane. The result is frequently astounding; the remedy is specially serviceable in all mycotic colpitis and endometritis, and in and around the womb; further in uterine hypersecretion accompanying benign growths (adenoma, myoma) whilst in malign sarcoma and carcinoma it decreases secretion and pain. Its greater advantages are that:—

It is comparatively cheap.

It is effective in very dilute solution (1:10,000.)

It is odorless in the dilution of 1:10,000 to 1:1000.

It is very easily soluble.

It is not poisonous, and it is easily carried about by a practitioner, as a small quantity goes a long way.

Dr. Winckel, however, recommends that only the above small doses should

be employed for vaginal injection at the outset, as strong solutions produce pain, and symptoms of irritation appear. The more concentrated solutions, however, can be employed for cauterizing around ulcerous surfaces and small mucous patches, while half to ten per cent. solutions are recommended as a disinfectant wash for the hands.

With regard to the employment of formic aldehyde as a hardening agent for animal tissues, Mr. Eccles, of the West London Hospital, calls attention to the usefulness of this adjunct in pathological and histological work. From his experience formic aldehyde in 40 per cent. solution for very soft tissues, in 20 per cent. solution for firmer, and in 10 per cent. for quite firm material acts as a most rapid and satisfactory hardening agent.

As has already been pointed out, however, although hardening is effected very rapidly by such concentrated solutions, the preservation of anatomical specimens, especially for microscopic examination, is better effected by a longer immersion in solutions of three-quarters to one per cent. strength.

—The Therapist.

HYSTERICAL MUSCULAR ATROPHY.

Hirt observes that hysteria may give rise to muscular wasting, usually one-sided, but occasionally limited to the area supplied by a single nerve. Sensation varies in these cases; sometimes the author has found it normal, more often altered, especially in regard to touch and temperature. Only twice was there hemi-anesthesia. The author speaks of a general wasting in hysteria affecting all the voluntary muscles. All other causes of wasting must, of course, be excluded. In three such cases, all fatal, the patients were women. In the last one, reported in detail, the disease lasted only two months, and produced almost a complete disappearance of the muscles. In an epidemic of hysterical spasm among girls in a school, the patient in question, aged 15, had suffered severely, but recovered, apparently, completely, in a few months. Some three months later she began to suffer from bodily weakness, dullness and desire to sleep. She was excited at times, did not wish to leave her bed, and refused food. There was no evidence whatever of or-

ganic disease, and she was at one time thought to be simulating. The wasting, however, was striking, and when seen by the author she presented the appearance of the most marked muscular wasting. There were no signs of tuberculosis, diabetes, etc. The R. D. was absent and the opening and closing contractions were very prompt. There were no fibrillary contractions. Death occurred shortly afterward.

—Deut. Med. Woch.

President Eliot, of Harvard, in the *Boston Medical and Surgical Journal*, says that he has often felt the wish that medical schools in general, and those of Massachusetts in particular, were producing more country doctors. "The country doctor should be given the chief place. He needs a better education than the city doctor. He has no specialist at his elbow. He must know himself and act himself. The training of the country doctor is important and needs to be developed, for he is more than a physician. He is a missionary. He is a social reformer—a sanitary reformer. He brings to his community the scientific spirit, a most valuable and important thing. The country doctor has one immense privilege and great happiness for his comparative isolation, that of living in the country, an inestimable prize for himself and for his family—as one who from long observation of where the most promising students come from can testify."

In the first settling of a new country, the physician has the opportunity for exerting a moulding influence upon the community that will last as long as the community lasts. His superior intelligence and mental training, aside from his work as a doctor, fit him for such duties. We have often traced this influence in old settlements back to the first physician who settled in the wilderness or on the plain.

Such considerations as these bring out in bold relief the necessity for inducing the student who intends to live as a country doctor to obtain the highest preliminary training and the best professional acquirement, including if possible a hospital service. Thus equipped he will be able easily to exert a kingly influence in all directions over his clients, ruling them in the interests of wholesome lives.

—American Lancet.

Electro-Therapeutics.

Under the Charge of S. H. MONELL, M. D., 44 West 46th St., New York.

It should always be remembered that, in using the galvano-cautery, it is the cherry red heat that prevents hemorrhage, but it is also best to use the ordinary jewelers' binding wire for your knife.

Recently Professor Friedenwald, of the College of Physicians and Surgeons in Baltimore, by passing a small electric lamp into the stomach of a patient, in a darkened room, was enabled to show the workings of that organ through the transparency thus produced in the abdominal wall.

The subject of electrical reactions and their value in diagnosis and prognosis were brought up for discussion at the February meeting of the New York Neurological Society. Erb's discovery was thought generally to be brilliant and valuable, as the reactions were not so uniform as they were at first supposed to be. A loss of reaction to the faradic current in a paralyzed muscle means a lesion in the peripheral nerve or the cells from which the nerve fibres originate which supply that muscle, and the muscle will atrophy, and recovery will only take place where reparation is made. No certain light for prognosis is thrown by the nature of the reaction.
—Ex.

Dr. Plym. S. Hayes, of Chicago, has found a way to obviate much of the pain after treatment by the Apostoli method. He has devised a new intra-uterine electrode of platinum, spiral, with a stilette in its centre. By its use the gas is allowed to escape from the uterus during treatment.

Louis Fisher, M. D., in a paper read before the Clinical Society of the Post-Graduate Medical School of New York, says that in 1886 Professor Hensch reported the favorable results of a grave case of diphtheria treated by means of the galvano-cautery and gargles of ice water. The application is said to be

painless, and the false membranes roll up and fall off at its very touch. The membranes do not reform, and the diphtheric process does not extend, the glandular swelling and the fever rapidly subside. In from eight to fourteen days the slough comes away and a healthy ulcer only is left.

ELECTRICITY AND SPIRITUALISM.

There is not the least evidence to show that electricity is thus employed; on the contrary, there is every evidence against its presence. The most delicate instrument for the detection of that force, which would show its presence when so light as scarcely to affect a thistle-down, is unaffected. The table, however violently moved, is not electrically excited, and the medium, writing or entranced, gives no indication of the force. It would be impossible for the human organism, constituted as it is, to generate an electric current.

Hence all the theories of spiritual phenomena, taking electricity as the cause, are untenable. That spiritual beings have any more direct connection with that force than mortals is also a groundless supposition. It has been said their celestial bodies were formed of electricity, as though it was a material substance, while it is without the least substance, being a force like heat or light.

Electricity can play no more important part in the spirit spheres than on earth, and in reality it belongs as an expression of force to this material sphere, and in the spirit world is represented by far swifter and more powerful forms of energy, as the celestial substance of that world is more sublimated and refined.

INTRA-UTERINE ELECTRO-THERAPEUTICS.

Dr. Apostoli asserts that intra-uterine electro-therapeutics (galvanism, faradism or the sinusoidal current), skillfully and patiently applied, deserves to remain at the head of gynecological conservative therapeutics.

Miscellany.

MEASLES AND PREGNANCY.

S. Remy (June, 1894) relates a case in which a pregnant woman, who had not had the disease in childhood, contracted measles during an epidemic after nursing two of her children through an attack of the disease. The attack in the mother, as in the children, was mild. On the evening of the second day of the eruption she had an attack of colic followed by copious action of the bowels. On the afternoon of the third day of the eruption she began to have labor pains, and in the evening the fetus was expelled en bloc in the membranes. The infant lived for a few minutes. The mother made a good recovery, the lochia were not excessive, and involution of the uterus proceeded in a normal manner. The pregnancy had lasted five months and ten days (from the last menstruation). Remy observed that for the whole product of conception to be thus detached during the six months uninjured, and containing a living fetus, is very unusual, and points to some special pathological process affecting the mucous membrane of the uterus. He suggests that measles may act upon the uterine mucous membrane as it does on that of the eyes, nose, pharynx and bronchi, causing an inflammatory congestion similar to that which occurs in variola. The abortion occurred in this case at an earlier stage of the attack of measles than in most of the scanty number on record.

—Arch. de Tocol. et de Gynec.

TREATMENT OF LEAD POISONING WITH MONOSULPHATE OF SODIUM.

Dr. Peyson gave thirty centigrammes of white lead to two dogs every day for twenty-three days, and then one gramme per diem for fifteen days, with the result that the urine contained only traces of lead. One dog was extremely ill; to it was administered a gramme of monosulphate of sodium a day, with the result that it was well in eight days. Both dogs were then killed, and on analyzing their livers it was found that the animal which had taken sulphate of sodium had only traces of lead

in its liver, while the liver of the untreated dog contained large quantities of lead.

—Journal de Medecine de Paris, vol. 1. p. 205 1894.

Prescriptions.

FOR CONDYLOMATA.

R Acidl Tannici, Hydrargyri Subchloridi, Amyli, partes equales.
Misce et fiat pulvis.

Sig. To be dusted on the affected parts.

FOR TAPE WORM.

R	Pellet Tannatis gr. x.....	gram.	65
	Spt. Rectif. oz. i.....		30
	Glycerini dr. ij.....		8
	Tinct. Aurantii dr. i.....		4
	Aque ad oz. ij.....		90
	Misce et fiat haustus.....		

Sig. Half to be given early in the morning, to be repeated in half an hour, and to be followed by a dose of castor oil.

FOR CHRONIC ECZEMA OF THE LEGS.

R Unguenti Zinci, Unguenti Hydrargyri, Unguenti Plumbi Acetatis, partes equales.
Misce et fiat unguentum.

POWDER FOR SPASMODIC ASTHMA.

R Lobelle pulv., Stramonii pulv., Theae Nigrae pulv., Potassi Nitratis, aa partes equales.
Misce bene et fiat pulvis.

Sig. A little to be burned and the vapor inhaled.

FOR IMPETIGO CONTAGIOSUM.

R	Ung. Hydrar. Ammon. dr. ij.....	grams.	8
	Ung. Zinci ad oz. i.....		30
	Misce et fiat unguentum.....		

Sig. To be applied after the affected parts have been soaked in carbolic oil.

APPLICATION FOR FOUL ULCERS.

R	Amyli oz. i.....	grams.	30
	Glycerini oz. 2.....		60
	Liquoris Iodi oz. i.....		30
	Aqua oz. 2.....		60
	Misce et fiat applicatio.....		

Sig. To be applied twice daily.

FOR ECZEMA SEBORRHEICUM.

R	Acidli Salicylici.....	grams.	
	Resorcin.....		
	Sulphurus Precipitati, aa		
	dr. 1½.....		6
	Adipis Benzoati, oz. i.....		30
	Misce et fiat unguentum.....		

Sig. To be efficiently applied to the affected parts.

—The Practitioner.

Notes by the Wayside.

BY ERNEST B. SANGREE, A. M., M. D.,
PHILADELPHIA.

I have lately had two cases in which, though a suspensory was badly needed, the ordinary support of the stores was of no use on account of its size.

In each of these men there had been a hydrocele, which was tapped; but there still remained a redundancy of tissue about the scrotum that made it too large to go in an ordinary suspensory, and also left it so large as to be to the owners a painfully conspicuous object.

Upon consulting my friend Dr. G—, he suggested the German army support. This has proved so eminently satisfactory in my two cases, and is in every way so superior to the trivial suspensory, that I want to call particular attention to it.

This support is triangular-shaped, pouch-like, and amply large. In the centre is a round hole through which the penis is passed, and it in turn is supported by another piece, sewed to the first below and buttoned by a single button above. The whole is fastened around the waist and around the thighs.

My friend, Dr. G.—, who is an old army surgeon, was so enthusiastic about these supports that he had gotten one for himself and maintains now that everybody ought to wear one, referring of course, only to the sterner sex. His claim is that with the support a man can hold himself erect and walk much easier, and incidently in the conversation he added that one becomes more amorous.

If this latter statement be true, which somewhat doubt, it might be taken advantage of in the treatment of partial and complete impotence.

Codliver oil in the abstract needs no praise, its position is too well established; but considered in the concrete, the matter is quite different. Many cannot take it plain on account of the sickening odor and villainous taste, and they must compromise on an emulsion.

These are generally unsatisfactory,

both because the agents employed throw extra work for the digestive organs instead of assisting, and because one must take so much to get so little. "When you're a married man, Samivel," said the elder Weller, "you'll understand a good many things as you don't understand now; but vether it's worth while goin' through so much to learn so little, as the charity boy said ven he got to the end of the alphabet, is a matter o' taste. I rayther think it isn't." Parke, Davis & Co., however, have out a new oil, which, though a pure oil, is surprisingly palatable. They sent a little sample the other day which I took at a draught, and found so much to my liking that had it been winter instead of summer, I might almost have been tempted to ask for a large bottle to use as a beverage.

The taste of codliver oil, by the way, whether plain or in emulsions, can be greatly lessened if a clove be chewed up a minute or two before taking the dose. The pungency of the clove seems temporarily to paralyze the function of taste, and the oil slips down almost unheeded.

"De las' sickness I hed, sah, was de purified sore throat," was the hearty response of a colored dispensary patient recently to an inquiry as to his latest trouble.

Some Western physicians are so polite as to come dangerously near the ludicrous. In the report of a case one of them courteously refers to the patient as "Miss Lottie S., aged 7 years."

Those who chew gum need no longer fear ridicule for the idiotic looking habit. The enterprising gum makers, to be abreast of the times, have put a little pepsin in the wad and now advertise the stuff as a cure-all for the whole train of digestive disorders.

At an open air entertainment some evenings since, I was much amused at the cries of a hawker as he went his rounds: "Only 5 cents a package for the pepsin chewing gum; it is the antiseptic."